

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: July 16, 2001, 18:12:47 ; Search time 37.19 Seconds
(Without alignments)
1048.164 Million cell updates/sec

Title: US-09-405-504A-53
Perfect score: 3384
Sequence: 1 MLTGASLVGLVLFSLKLVKLT.....RYVPIDEQVSRVNGEKL 643

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 412676 seqs, 60623988 residues
Total number of hits satisfying chosen parameters: 412676

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

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- 18: /SIDS8/gcgdata/geneseq/geneseq/AA1997.DAT:*
- 19: /SIDS8/gcgdata/geneseq/geneseq/AA1998.DAT:*
- 20: /SIDS8/gcgdata/geneseq/geneseq/AA1999.DAT:*
- 21: /SIDS8/gcgdata/geneseq/geneseq/AA2000.DAT:*
- 22: /SIDS8/gcgdata/geneseq/geneseq/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	3384	100.0	643	20	AA14943 - <i>Protein</i>
2	3384	100.0	643	20	AA14943
3	3110	91.9	643	20	AA14945
4	3110	91.9	643	20	AA14958
5	3054.5	90.3	616	21	AA42756
6	2708	80.0	511	21	AA71058
7	2433	71.9	506	20	AA14934
8	2119	62.6	646	20	AA14942
9	2119	62.6	646	20	AA14946
10	2114	62.5	646	20	AA140435
11	2114	62.5	646	20	AA140436

12	2087	61.7	646	20	AA14952	Amino acid sequenc
13	2080.5	61.5	647	20	AA14955	Amino acid sequenc
14	2036	60.2	405	20	AA14954	Amino acid sequenc
15	1441.5	42.6	590	20	AA14960	Partial amino acid
16	1292	38.2	650	20	AA14962	Amino acid sequenc
17	1136	33.6	213	20	AA14938	Amino acid sequenc
18	1122	33.2	619	20	AA14944	Amino acid sequenc
19	1132	33.2	619	20	AA14951	Amino acid sequenc
20	1111	32.8	615	20	AA14963	Amino acid sequenc
21	1064	31.4	620	20	AA14947	Amino acid sequenc
22	1057.5	31.2	730	20	AA14949	Amino acid sequenc
23	1057.5	31.2	730	21	AA14953	Human PRO703 prote
24	1057.5	31.2	730	21	AA14953	Human PRO703 (UNO3
25	1057.5	31.2	730	22	AA14953	Human PRO703 prote
26	1057	31.2	702	20	AA14969	Human fatty acid t
27	1053.5	31.1	609	20	AA14957	Amino acid sequenc
28	1053.5	31.1	613	20	AA14953	Amino acid sequenc
29	1044	30.9	620	20	AA14953	Amino acid sequenc
30	987.5	29.2	690	21	AA14935	Amino acid sequenc
31	960	28.4	662	20	AA14935	Human ORFX ORF2671
32	960	28.4	689	20	AA14955	Amino acid sequenc
33	886.5	26.2	597	20	AA14968	Amino acid sequenc
34	886.5	26.2	597	20	AA14941	Amino acid sequenc
35	872.5	25.8	623	20	AA14956	Amino acid sequenc
36	844	24.9	642	15	AA14926	Amino acid sequenc
37	801	23.7	643	20	AA14964	Cephalosporin C #1
38	774.5	22.9	330	20	AA14948	Amino acid sequenc
39	714	21.1	623	20	AA14967	Amino acid sequenc
40	705	20.8	335	20	AA14940	Amino acid sequenc
41	679.5	20.1	354	20	AA14950	Amino acid sequenc
42	663.5	19.6	286	20	AA14936	Amino acid sequenc
43	421.5	12.5	191	20	AA14937	Amino acid sequenc
44	389	11.5	199	20	AA14939	Amino acid sequenc
45	306.5	9.1	525	20	AA14953	B. diminita pime1y1

ALIGNMENTS

RESULT	1	
AA14943		
ID	AA14943 standard; Protein; 643 AA.	
XX		
AC	AA14943;	
DT		
DE	31-MAY-2000 (first entry)	
XX		
XX	Amino acid sequence of human hFATP4.	
KW	Fatty acid transport protein; FATP; long chain fatty acid; LCFA.	
XX	fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.	
OS	Homo sapiens.	
XX		
PN	W0936537-A2.	
XX		
PD	22-JUL-1999.	
XX		
PF	14-JAN-1999;	99WO-US00182.
XX		
PR	14-JAN-1999;	99US-0232201.
PR	15-JAN-1998;	98US-0071374.
PR	20-JUL-1998;	98US-0093491.
PR	04-DEC-1998;	98US-0110941.
PR	14-JAN-1999;	99US-0232195.
PR	14-JAN-1999;	99US-0232197.
XX	14-JAN-1999;	99US-0232200.
XX		
PA	(MILL-) MILLENNIUM PHARM INC.	
PA	(WHED) WHITEHEAD INST BIOMEDICAL RES.	
XX		
XX	Gimeno RE, Hirsch DJ, Lodish HF, Stahl A, Tartaglia LA;	
PI		
XX		

DR WPI: 1999-444398/37.
DR N-PSDB: AA200353.

PT Fatty acid transport proteins and related polynucleotides, useful
for treating obesity, diabetes and heart disease

XX Examples: Fig 27; 255bp; English.

XX The invention provides a family of fatty acid transport proteins (FATPs)
XX that mediate transport of long chain fatty acids (LCFAs) across cell
XX membranes into cells. Human and murine FATP proteins and nucleic acids
XX encoding the proteins are provided. The FATP proteins can be produced
XX by standard recombinant methodology. Fatty acid uptake by cells can be
XX modulated by modulating biosynthesis of FATP proteins especially FATP6.
XX In particular, antisense oligonucleotides can be used to modulate FATP
XX biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
XX uptake in cardiac muscle of humans. Agents can be directed to cardiac
XX muscle or liver by administration of a complex of the agent and a FATP6
XX binding moiety. DNA encoding FATP proteins can be used as a reference
XX used in detecting variant alleles or homologues. Altering the LCFA uptake
XX by administering an inhibitor or enhancer of FATP transport function in
XX the small intestine can decrease or increase calories available as fats,
XX and can decrease or increase circulating fatty acids. Blocking the
XX function of FATP4 and also FATP2, is useful for treating obesity,
XX diabetes and heart disease.

XX Sequence 643 AA:

Query Match 100.0%; Score 3384; DB 20; Length 643;

Best Local Similarity 100.0%; Pred. No. 0; Mismatches 0; Indels 0; Gaps 0;

Matches 643; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 mlgaalvgvllfskvlkpwvqvfslfllylgsggrftrfvlktrldifgglvll 60
QY 61 KVAKATKQCLQERRVPIIFASTVRRHPRKTALEPGSTHTWTFRQLDEYSSVANFLQA 120
DB 61 kvakatkqclqerrvpilfastvrrhprktailepgsthtwtfqrldesyssvanflqa 120
QY 121 RGLASGDVAIAEMENRENEVGLMGAKGVEALINTMLRDALHCTTTRARALVFG 180
DB 121 rglasgdvaiaemenrenevglmakgvealintmlrdalhctttraralvfg 180
QY 121 rglasgdvaiaemenrenevglmakgvealintmlrdalhctttraralvfg 180
QY 181 SEMASACEVHASLDPSLSLFCSGSWEPGAVPSTEHDLPLKDAKRLPSCPDGKFTDK 240
DB 181 semasaicevhaaldpslsifcsgswepgavpstehdlpllkdaakrlpscpdgkftdk 240
QY 241 LFTYITSGTTGLPKAIVVHSRYRMAALVYGGFRMRPMDIYDCPLPHSGNTVGIQ 300
DB 241 lftytstgtglpkaiivhsryrmaalvyggfrmrpmdiydclplhsgntvgiq 300
QY 301 CLHAGTAVYRRKFSASRFMDICIKYNTIYVIGELCYLLNOPPREAENHOVRMALG 360
DB 301 clhagtavyrkfsasrfmdicikyntiyvigelcyllynoppreaenhovrmalg 360
QY 361 NGLRQSIWTFSSRFHPOVAEFGATECNCSLGNFDSGVAGCENSRLLSEVYDRLVR 420
DB 361 nglrqsitwtfssrfhpovaeefgatecnslgnfdsvglcgsfnsrllsevydrlvr 420
QY 421 VNEDIMELIRGPDGVCIPQGEPOLVRIIQKDLPRFDDGLWOGANNKIADVRKK 480
DB 421 vnedimelirgpdgvcipqgepqlvyrilqkdlprfddglwogannkiadvrrk 480
QY 481 GDOAVYTGVLVDELGYLFRDRGDPFRMKGENVSTEVGCTSRLLMDADVAVYGYE 540
DB 481 gdovaytgvlvdelgylyfrdrgdprfmrkgenvstevgctsrllmdadvavygye 540
QY 541 VPGTEGRAGMAAVASPTGNCLEERFAOVLEKELPLYARPIFLRLPELHKTGTVEFQCTE 600
DB 541 vpgtegragmaavasp tgnclerfaovlekelplyarpiflrlpelhktgtvefckte 600

QY 601 LRKEGDPATVADPFLYLDAAQGRVYLDQEAYSRIQAGEEL 643
DB 601 lrkegdpavtkdplflyldaaqgrvryldqeaysrldqageel 643

RESULT 2

ID AAV14949 standard; protein; 643 AA.

AAV14949;

26-OCT-1999 (first entry)

Amino acid sequence of human hsfATP4.

Fatty acid transport protein; FATP; long chain fatty acid; LCFA; human;
fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.

Homo sapiens.

MO9936537-A2.

22-JUL-1999.

14-JAN-1999; 99WO-US00182.

14-JAN-1999; 99US-0232201.

15-JAN-1998; 98US-0071374.

20-JUL-1998; 98US-0093491.

04-DEC-1998; 98US-0110941.

14-JAN-1999; 99US-0232195.

14-JAN-1999; 99US-0232197.

14-JAN-1999; 99US-0232200.

(MILL-) MILLENNIUM PHARM INC.

(WHED) WHITEHEAD INST BIOMEDICAL RES.

Glumeno RE, Hirsch DJ, Lodish HF, Stahl A, Tartaglia LA;

WPI: 1999-444398/37.

N-PSDB: AA200359.

Claim 73; Fig 51; 255bp; English.

The invention provides a family of fatty acid transport proteins (FATPs)

that mediate transport of long chain fatty acids (LCFAs) across cell

membranes into cells. Human and murine FATP proteins and nucleic acids

encoding the proteins are provided. The FATP proteins can be produced

by standard recombinant methodology. Fatty acid uptake by cells can be

modulated by modulating biosynthesis of FATP proteins especially FATP6.

In particular, antisense oligonucleotides can be used to modulate FATP

biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid

uptake in cardiac muscle of humans. Agents can be directed to cardiac

muscle or liver by administration of a complex of the agent and a FATP6

binding moiety. DNA encoding FATP proteins can be used as a reference

used in detecting variant alleles or homologues. Altering the LCFA uptake

by administering an inhibitor or enhancer of FATP transport function in

the small intestine can decrease or increase calories available as fats,

and can decrease or increase circulating fatty acids. Blocking the

function of FATP4 and also FATP2, is useful for treating obesity,

diabetes and heart disease.

Sequence 643 AA:

Query Match 100.0%; Score 3384; DB 20; Length 643;

Best Local Similarity 100.0%; Pred. No. 0; Mismatches 0; Indels 0; Gaps 0;

Matches 643; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 MLGASLVGVLLFSKLVKLPWTVGFSLFLYLGSGGMRFTVETIKTTRDIFGGLVLL 60

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DB 61 KYKAVRGQIGERTVPPIFASTVRHPKKTALFEQDTHMTFQODEYSSVANFLQA 120
QY 121 RGLASGVVAIIPENRNEFEVGLWGLMAKLGVEAALINTNLRRDALHCLTTSBARALVFG 180
DB 121 RGLASGVVAIIPENRNEFEVGLWGLMAKLGVEAALINTNLRRDALHCLTTSBARALVFG 180
QY 181 SEMASATICEVHASLDPSLSIFCSGSWEPCGAVPSTEHLDPLKDAKPHLPSCPDGFTDK 240
DB 181 SEMASATICEVHASLDPSLSIFCSGSWEPCGAVPSTEHLDPLKDAKPHLPSCPDGFTDK 240
QY 241 LFYITSGTGTGPKAAIVVHSRYRMAALVYGGFRRPNDIYDCLPLHSAAGNTVIGIQ 300
DB 241 LFYITSGTGTGPKAAIVVHSRYRMAALVYGGFRRPNDIYDCLPLHSAAGNTVIGIQ 300
QY 301 CLHGMTVIVIRKKSASRFWDCCIKYNCITVQYIGELCRYLNOPPRAENOHQVBMALG 360
DB 301 CLHGMTVIVIRKKSASRFWDCCIKYNCITVQYIGELCRYLNOPPRAENOHQVBMALG 360
QY 361 NGLRQSIWTFSSRHHIPQVAEFYATGECNCSLGNFDSQVACGFNSRILSFVYPIRLVR 420
DB 361 NGLRQSIWTFSSRHHIPQVAEFYATGECNCSLGNFDSQVACGFNSRILSFVYPIRLVR 420
QY 421 VVEDIMELIRGPDGVCIPQGPBPQGLVRIIQRDLRFRGQYLNQGANKKIADVFKK 480
DB 421 VVEDIMELIRGPDGVCIPQGPBPQGLVRIIQRDLRFRGQYLNQGANKKIADVFKK 480
QY 481 GDOAYLTGDLVMDLGYLYFRDRTGDTFRMKGENVSTTEVEGLSRLLDMADVAVYGE 540
DB 481 GDOAYLTGDLVMDLGYLYFRDRTGDTFRMKGENVSTTEVEGLSRLLDMADVAVYGE 540
QY 541 VGSTGRAGMAVAPSPGNCLEERRAOYLEKELPIYARPIRLPLPELHKTGYTKFOKTE 600
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QY 601 LRKEGPDPAIVDPLEFYDAQKGRVPPDOEAYSRIQAGEEKL 643
DB 601 LRKEGPDPAIVDPLEFYDAQKGRVPPDOEAYSRIQAGEEKL 643

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RESULT 3

AA14945 standard; protein: 643 AA.

AA14945;

26-OCT-1999 (first entry)

Amino acid sequence of mouse FATP4.

Fatty acid transport protein: FATP, long chain fatty acid; LCFA; murine;

fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.

Mus sp.

W0936537-A2.

22-JUL-1999.

14-JAN-1999; 99WO-US00182.

14-JAN-1999; 99US-0232201.

15-JAN-1998; 98US-0071374.

20-JUL-1998; 98US-0093491.

04-DEC-1998; 98US-0110941.

14-JAN-1999; 99US-0232195.

14-JAN-1999; 99US-0232197.

14-JAN-1999; 99US-0232200.

PA (MIL-) MILLENNIUM PHARM INC.
 PA (WHEED) WHITEHEAD INST BIOMEDICAL RES.
 PI Glimeno RE, Hirsch DJ, Lodish HF, Stahl A, Tartaglia LA;
 XX WPI: 1999-444398/37.
 DR N-PSDB: AA200355.
 XX
 PT Fatty acid transport proteins and related polynucleotides, useful
 PT for treating obesity, diabetes and heart disease
 XX
 PS Example 1; Fig 43B; 255pp; English.
 CC The invention provides a family of fatty acid transport proteins (FATPs)
 CC that mediate transport of long chain fatty acids (LCFAs) across cell
 CC membranes into cells. Human and murine FATP proteins and nucleic acids
 CC encoding the proteins are provided. The FATP proteins can be produced
 CC by standard recombinant methodology. Fatty acid uptake by cells can be
 CC modulated by modulating biosynthesis of FATP proteins especially FATP6.
 CC In particular, antisense oligonucleotides can be used to modulate FATP
 CC biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
 CC uptake in cardiac muscle of humans. Agents can be directed to cardiac
 CC muscle or liver by administration of a complex of the agent and a FATP6
 CC binding moiety. DNA encoding FATP proteins can be used as a reference
 CC used in detecting variant alleles or homologues. Altering the LCFA uptake
 CC by administering an inhibitor or enhancer of FATP transport function in
 CC the small intestine can decrease or increase calories available as fats,
 CC and can decrease or increase circulating fatty acids. Blocking the
 CC function of FATP4 and also FATP2, is useful for treating obesity,
 CC diabetes and heart disease.
 CC
 XX Sequence 643 AA:

Query Match 91.9%; Score 3110; DB 20; Length 643;
 Best Local Similarity 91.0%; Pred. No. 0;
 Matches 585; Conservative 31; Mismatches 27; Indels 0; Gaps 0;

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DB 1 MLIGASLVGVLLFSKLVKIPWTCVGFSLIFLYIGSGVFRIVKIKIRIDIFGLVL 60
QY 61 KYKAVROCLQERRTVPIFASTVRHRPKTALLFEQDTHMTFQODEYSSVANFLQA 120
DB 61 KYKAVRGQIGERTVPPIFASTVRHPKKTALFEQDTHMTFQODEYSSVANFLQA 120
QY 121 RGLASGVVAIIPENRNEFEVGLWGLMAKLGVEAALINTNLRRDALHCLTTSBARALVFG 180
DB 121 RGLASGVVAIIPENRNEFEVGLWGLMAKLGVEAALINTNLRRDALHCLTTSBARALVFG 180
QY 181 SEMASATICEVHASLDPSLSIFCSGSWEPCGAVPSTEHLDPLKDAKPHLPSCPDGFTDK 240
DB 181 SEMASATICEVHASLDPSLSIFCSGSWEPCGAVPSTEHLDPLKDAKPHLPSCPDGFTDK 240
QY 241 LFYITSGTGTGPKAAIVVHSRYRMAALVYGGFRRPNDIYDCLPLHSAAGNTVIGIQ 300
DB 241 LFYITSGTGTGPKAAIVVHSRYRMAALVYGGFRRPNDIYDCLPLHSAAGNTVIGIQ 300
QY 301 CLHGMTVIVIRKKSASRFWDCCIKYNCITVQYIGELCRYLNOPPRAENOHQVBMALG 360
DB 301 CLHGMTVIVIRKKSASRFWDCCIKYNCITVQYIGELCRYLNOPPRAENOHQVBMALG 360
QY 361 NGLRQSIWTFSSRHHIPQVAEFYATGECNCSLGNFDSQVACGFNSRILSFVYPIRLVR 420
DB 361 NGLRQSIWTFSSRHHIPQVAEFYATGECNCSLGNFDSQVACGFNSRILSFVYPIRLVR 420
QY 421 VVEDIMELIRGPDGVCIPQGPBPQGLVRIIQRDLRFRGQYLNQGANKKIADVFKK 480
DB 421 VVEDIMELIRGPDGVCIPQGPBPQGLVRIIQRDLRFRGQYLNQGANKKIADVFKK 480
QY 481 GDOAYLTGDLVMDLGYLYFRDRTGDTFRMKGENVSTTEVEGLSRLLDMADVAVYGE 540
DB 481 GDOAYLTGDLVMDLGYLYFRDRTGDTFRMKGENVSTTEVEGLSRLLDMADVAVYGE 540

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QY 541 VPTEGRAGMAAASPNGCDLERFAOVLEKELEPLVAPRIFRLPPELHKGTGKFOKTE 600
 Db 541 vptegragmaavaaspsncldesfaqltkelplyarpifrlfpehktgkftkfkte 600
 QY 601 LRKEGFPDAIVKDFLYLDAQGRVYPLDQEAYSRIQAGEEKL 643
 Db 601 lrkegfpsvkvkdpflyldarkgcyvaldqeaytrigageekl 643

RESULT 4

AA14958 standard; protein: 643 AA.

AA14958;

26-OCT-1999 (first entry)

Amino acid sequence of murine mmFATP4.

Fatty acid transport protein; FATP; long chain fatty acid; LCFA; murine; fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.

Mus sp.

WO9936537-A2.

22-JUL-1999.

14-JAN-1999; 99WO-US00182.

14-JAN-1999; 99US-0232201.

15-JAN-1998; 98US-0071374.

20-JUL-1998; 98US-0093491.

04-DEC-1998; 98US-0110941.

14-JAN-1999; 99US-0232195.

14-JAN-1999; 99US-0232197.

14-JAN-1999; 99US-0232200.

(MILL-) MILLENNIUM PHARM INC.

(MHED) WHITEHEAD INST BIOMEDICAL RES.

Gimeno RE, Hirsch DJ, Lodish HF, Stahl A, Tartaglia LA;

WPI; 1999-444398/37.

N-PSDB; AA200368.

Fatty acid transport proteins and related polynucleotides, useful for treating obesity, diabetes and heart disease

Example 1; Fig 69; 255pp; English.

The invention provides a family of fatty acid transport proteins (FATPs) that mediate transport of long chain fatty acids (LCFAs) across cell membranes into cells. Human and murine FATP proteins and nucleic acids encoding the proteins are provided. The FATP proteins can be produced by standard recombinant methodology. Fatty acid uptake by cells can be modulated by modulating biosynthesis of FATP proteins especially FATP6. In particular, antisense oligonucleotides can be used to modulate FATP biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid uptake in cardiac muscle of humans. Agents can be directed to cardiac muscle or liver by administration of a complex of the agent and a FATP6 binding moiety. DNA encoding FATP proteins can be used as a reference by administering an inhibitor or enhancer of FATP transport function in the small intestine can decrease or increase calories available as fats, and can decrease or increase circulating fatty acids. Blocking the function of FATP4 and also FATP2, is useful for treating obesity, diabetes and heart disease.

Sequence 643 AA;

Query Match 91.9%; Score 3110; DB 20; Length 643;
 Best Local Similarity 91.0%; Pred. No. 0;
 Matches 585; Conservative 31; Mismatches 27; Indels 0; Gaps 0;

QY 1 MLGASLVGVLLSKVLKLPWTVGSLFLYLGSQGFIVFKTRIRDFGLVLI 60
 Db 1 mlgaslvgalilfskvlklpwtvgfslfllylgsqgfvfktrirdfgglvll 60
 QY 61 KVKAKVROCOERETVITLFASTVRRHPDKTALIFECTGTHWTFROLDSESSVAFLQA 120
 Db 61 kvkaktvrryldetkvtplfaswqvrpdkctallfegtdmwftrldessvaflq 120
 QY 121 RGLASGVAAIFMERNREPVGLMLGNKLGVEALINTNLRPDALHCLTTSRRALVVG 180
 Db 121 rglasgvnaifmernrefvglwlgmaklgveaalintnlrdalrhcldtsraraallfg 180
 QY 181 SEASAIICEVHASLDPSLSIFCSGSMRPGAVPPTSTHDLPLDARKHLPSCDKEFTOK 240
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 QY 301 CLHGMVTVIRKFSASREWDCKIKYCTIVQYIGELCRYLNQPREAENQHVMAIG 360
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 Db 481 gdavlygdvlymdelgylyfrdrtgtfprkgbnstvegtlslmdadvanygye 540
 QY 541 VPTEGRAGMAAASPNGCDLERFAOVLEKELEPLVAPRIFRLPPELHKGTGKFOKTE 600
 Db 541 vptegragmaavaaspsncldesfaqltkelplyarpifrlfpehktgkftkfkte 600
 QY 601 LRKEGFPDAIVKDFLYLDAQGRVYPLDQEAYSRIQAGEEKL 643
 Db 601 lrkegfpsvkvkdpflyldarkgcyvaldqeaytrigageekl 643

RESULT 5
 AAB42756 standard; protein: 616 AA.
 AAB42756;
 08-FEB-2001 (first entry)

Human ORFX ORF2520 polypeptide sequence SEQ ID NO:5040.

Human: open reading frame; ORFX; detection: cytostatic; hepatotropic; vulnary; antipsoriatic; antiparkinsonian; neurotropic; neuroprotective; anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiac; immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive; dermatological; immunosuppressive; antiinflammatory; antiviral; antibacterial; antifungal; antirheumatic; antihypoid; neurodegenerative disorder; cancer; proliferative disorder; hypertension; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS; cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound; bone damage; cartilage damage; antiinflammatory disease; coagulation; thrombosis; contraceptive.

XX OS Homo sapiens.
 XX PN WO200058473-A2.
 XX PD 05-OCT-2000.
 XX PF 31-MAR-2000; 2000WO-US08621.
 XX PR 31-MAR-1999; 99US-0127607.
 XX PR 02-APR-1999; 99US-0127636.
 XX PR 05-APR-1999; 99US-0127728.
 XX PR 30-MAR-2000; 2000US-0540763.
 XX PA (CURA-) CURAGEN CORP.
 XX PI Shinkels RA, Leach M;
 XX DR WPI; 2000-602362/57.
 XX DR N-PSDB; AAC76965.
 XX PT Novel nucleic acids and peptides derived from open reading frame X,
 XX PT useful for treating e.g. cancers, proliferative disorders,
 XX PT neurodegenerative disorders and cardiovascular disease -
 XX PS Claim 11; Page 4222-4224; 5507pp; English.
 CC AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397,
 CC which represent the human ORFX open reading frames 1 to 3161. The ORFX
 CC sequences have activities such as: cytostatic; hepatotropic; vulnary;
 CC antiproliferic; antiparkinsonian; nootropic; neuroprotective;
 CC osteopathic; anticonvulsant; antiallergic; immunosuppressant;
 CC immunostimulant; cardiant; thrombolytic; coagulant; vasotropic;
 CC antidiabetic; hypotensive; dermatological; immunosuppressive;
 CC antiinflammatory; antibacterial; antiviral; antifungal; antirheumatic;
 CC antihypoid; and antinaemic. The sequences can be used for determining
 CC the presence of or predisposition to, or preventing or treating
 CC pathological conditions associated with an ORFX-associated disorder. The
 CC nucleic acids can be used to express ORFX proteins in gene therapy.
 CC vectors. The proteins and nucleic acids may be used to treat cancers,
 CC proliferative disorders, neurodegenerative disorders, osteoarthritis,
 CC graft vs host disease, cardiovascular disease, diabetes mellitus,
 CC hypertension, hypothyroidism, cholesterol ester storage, systemic lupus
 CC erythematosus, severe combined immunodeficiency (SCID), AIDS, viral,
 CC bacterial or fungal infection, malaria, autoimmune disorders, asthma,
 CC allergies, aplastic anaemia, burns, wounds, bone and cartilage damage,
 CC nocturnal haemoglobinuria, antiinflammatory disease; to enhance
 CC coagulation; to inhibit thrombosis; and as a contraceptive.
 CC XX
 SQ Sequence 616 AA;
 Query Match 90.3%; Score 3054.5; DB 21; Length 616;
 Best Local Similarity 95.9%; Pred. No. 0;
 Matches 587; Conservative 2; Mismatches 22; Indels 1; Gaps 1;

DB 241 lfllytsqtcgipkaalvsnrlyymaalvyygtrimpndivdcpljhsaagnivgig 300
 QY 301 CLHGMTEVIRKFSASRFMDCKIKYNTIYOYIGELCRYLINOPREANONQVRNALG 360
 DB 301 clhgmtevirkfssarfwddckikynctlvqyigelcryllngpreaenqgvrmalg 360
 QY 361 NGLQSIWTFNSSRFHHPQVAEFYGAECNCSIGNDSQYACGFNSRIISFPYIRLVR 420
 DB 361 naagsgpftpaasfiprwlsctg-pecnosignfsgyagacgfnrslisfypirivr 419
 QY 421 VNEDTMELIRGPDGVCIPCGEPGOLVGRIRKDPILRRFDGYLNGCANRKLAKVYFK 480
 DB 420 vnedtmelirgpdgvcipcpgepgqlvgrilgkdpilrrfdgylngcanrklakvirk 479
 QY 481 GDQAVYLTGDLVMDLGLYLFRRDGTFRMKGBNVSSTVEGTLNRLDMADVAYGYE 540
 DB 480 gdqayltgdlvmdelgyllyfrdrtgdtfrwkgenvsttevegtlslrlmadvaygye 539
 QY 541 VPETEGRAMAAVASPTGNCNDLERRFAVLEKEPLVYARPFLLRLPELHRTGTYKQKTE 600
 DB 540 vpetegramaavaasptgncndlerfaqlvlekeplvyarpfllrpehrtgtykqkte 599
 QY 601 LRKEGFPATYK 612
 DB 600 lrkeatfpalyk 611
 RESULT 6
 AAY71058
 ID AAY71058 standard; Protein; 511 AA.
 XX
 AC AAY71058;
 XX
 DT 29-AUG-2000 (first entry)
 XX
 DE Human membrane transport protein, MTRP-3.
 XX
 KW Human; membrane transport protein; MTRP-3; antiinflammatory; cytostatic;
 KW antihypoid; immunosuppressive; thyromimetic; antidiabetic; nootropic;
 KW antidiarrhetic; neuroprotective; antidiuretic; nephrotropic; virucide;
 KW antihelmintic; protozoacide; antibacterial; neuroleptic; antigout;
 KW diagnosis; prevention; treatment; membrane transport disorder; epilepsy;
 KW menkes disease; diabetes; parkinson's disease; neurological disorder;
 KW Alzheimer's disease; depression; schizophrenia; immune disorder; allergy;
 KW inflammatory disorder; AIDS; Addison's disease; atherosclerosis; gout;
 KW Graves disease; Hashimoto's thyroiditis; microbial infection; cancer;
 KW cell proliferative disorder.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Modified-site 39 /note= "Phosphorylation site"
 FT Modified-site 99 /note= "Phosphorylation site"
 FT Modified-site 106 /note= "Phosphorylation site"
 FT Modified-site 111 /note= "Phosphorylation site"
 FT Modified-site 151 /note= "Phosphorylation site"
 FT Modified-site 183 /note= "Phosphorylation site"
 FT Modified-site 194 /note= "Phosphorylation site"
 FT Modified-site 240 /note= "Phosphorylation site"
 FT Modified-site 353 /note= "Phosphorylation site"
 FT Modified-site 376 /note= "Phosphorylation site"
 FT Modified-site 385 /note= "Phosphorylation site"

FT Modified-site /note= "Phosphorylation site"
 FT 387
 FT Modified-site /note= "Phosphorylation site"
 FT 461
 FT Modified-site /note= "Phosphorylation site"
 FT 195
 FT Modified-site /note= "N-glycosylation site"
 FT 238
 FT Modified-site /note= "N-glycosylation site"
 FT 258
 FT Modified-site /note= "N-glycosylation site"
 FT 383
 FT Modified-site /note= "N-glycosylation site"
 FT 2.14
 FT Region /note= "Lipocalin signature sequence"
 FT 4...404
 FT Binding-site /label= AMP-binding_enzyme_motif
 FT 91..144
 FT Binding-site /label= AMP-binding_domain
 FT /note= "Signature sequence"
 FT
 XX WO200026245-A2.
 XX
 XX 11-MAY-2000.
 XX
 XX 04-NOV-1999: 99WO-US26048.
 XX
 XX 04-NOV-1998: 98US-0172255.
 XX 24-NOV-1998: 98US-0172252.
 XX 22-DEC-1998: 98US-0172214.
 XX 26-FEB-1999: 99US-0121896.
 XX
 XX (INCY-) INCYTE PHARM INC.
 XX
 XX Hillman JL, Yue H, Tang YT, Lal P, Corley NC, Guegler KJ;
 XX Baughn MK, Azimzai Y, Lu DAM;
 XX
 XX WPI: 2000-365576/31.
 XX N-PSDB: AAD00602.
 XX
 XX Novel human membrane transport proteins useful for diagnosis,
 XX prevention and treatment of membrane transport disorders,
 XX PT Immune/inflammatory disorders and cell proliferative disorders
 XX including cancer
 XX
 XX Claim 1: Page 93-94; 136pp; English.
 XX
 XX The present sequence is a membrane transport protein,
 XX MRP-3 from Incyte clone 1720440 isolated from human BLADN0706 cDNA
 XX library. MRP-3 shows homology to human and mouse fatty acid
 XX transport proteins and is expressed
 XX in reproductive, nervous and gastrointestinal tissues.
 XX The present sequence is useful in diagnosis, prevention and treatment
 XX of disorders related with increased or decreased expression of MRP
 XX such as familial goitre, Menkes disease, diabetes, Parkinson's disease,
 XX neurological disorders such as Alzheimer's disease, depression, epilepsy,
 XX schizophrenia, immune/inflammatory disorders such as AIDS, Addison's
 XX disease, allergies, atherosclerosis, Graves disease, gout, Hashimoto's
 XX thyroiditis, viral, bacterial, fungal, parasitic, protozoal or
 XX helminthic infections and cell proliferative disorders such as cancer.
 XX Fragments of MRP polynucleotides are useful as targets in microarrays.
 XX MRP DNA is also useful for generating hybridisation probes useful in
 XX mapping genomic sequences and detecting differences in sequences among
 XX normal, carrier and affected individuals. It is also used for
 XX screening libraries of compounds in drug screening techniques.
 XX
 XX Sequence 511 AA:

Query Match 80.0%; Score 2708; DB 21; Length 511;
 Best Local Similarity 99.8%; Pred. No. 1 4e-272;
 Matches 510; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 133 MNRNRFVGLWLGAKLGEVEALLINTNLRDALLHCLTTSARALVGESEMA5ICEVHA 192
 Db 1 mennerfyglwlgmaklgyveaallntnrrdaallhcltsaraalvgsemasaicevha 60
 QY 193 SLDPSELFLFCSSGSEWEPGAVPSTEDLPLKADARKHLPSCPDKFTDKLFYVNSGTGL 252
 Db 61 sldpseflfscsgsewepgavpstehldpllkadarkhlpscpdkftcklfyivnsgtgl 120
 QY 253 PKAALVHSRTRYRMAALVYTFGRMRPNDIVDCPLPHSAGNIVIGOCCLHGTVIYRK 312
 Db 121 pkaalvhsrtryrmaalvytfgmrpndivdcplphsagnivigocclhgtvviyrk 180
 QY 313 KPSASRFMDPCIKYKNCITVQYIGELCRYLNQPREAENOHQVMALGNLROSITWNFS 372
 Db 181 kfsasrfmdpcikynctlvqyigelcrylnqpreaenqvmalgnlrosgitwnfs 240
 QY 373 SRFHIPQVAEFYEGATECNCSISGNFDSQVAGCGFNSRILSFVYPRLVVVEDTMEILRGP 432
 Db 241 srfhipyaeftyegatecnscisgnfdsgvqagcfnsrilsfvyprlvrvnedtmelirgp 300
 QY 433 DGCYICPGGEPGQLVGRHIOKDPLEKRPDGYLNGGANNKTIKAVYFKKGDQAYITGVLY 492
 Db 301 dgcycipcggepgqlvgrhioqdpkrrpdyngngannkktikavfykkgdqayitgvlv 360
 QY 493 MDELGYLYFRDRTGDTFFMKGENVSTTEVEGTLISRLDMADVAVYGVYEVGTBGRAGMAA 552
 Db 361 mdelgylyfrdrtgdtffmkgensttevegtsrlldmadvavygvyevgtegragmaa 420
 QY 553 VASPTGNCDLERFAOVLEKELPLVAPRPLFLRLDELHKTGYKQKTELKREGDPDAIVK 612
 Db 421 vaspngncdlerfaqvlekeplvaprplflrlpelhktgykqktelekregdpdaivk 480
 QY 613 DPLFYLDNOKGRVYPLDOEAYSRIQAGEEK 643
 Db 481 dplfyldnqkgrvypldqeaysriqageekl 511

RESULT 7
 ID AAY14934 standard; protein: 506 AA.
 XX AAY14934;
 AC AAY14934;
 XX
 XX 26-OCT-1999 (first entry)
 XX
 XX Amino acid sequence of murine mmeFATP4.
 XX
 XX Fatty acid transport protein; FATP, long chain fatty acid; LCFA; murine;
 XX fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
 XX
 XX Mus musculus.
 XX
 XX WO9936537-A2.
 XX
 XX 22-JUL-1999.
 XX
 XX 14-JAN-1999: 99WO-US00182.
 XX
 XX 14-JAN-1999: 99US-0232201.
 XX 15-JAN-1998: 98US-0071374.
 XX 20-JUL-1998: 98US-0093491.
 XX 04-DEC-1998: 98US-0110941.
 XX 14-JAN-1999: 99US-0232195.
 XX 14-JAN-1999: 99US-0232197.
 XX 14-JAN-1999: 99US-0232200.
 XX
 XX (MILL-) MILLENNIUM PHARM INC.
 XX (WHED) WHITEHEAD INST BIOMEDICAL RES.
 XX
 XX Gimeno RE, Hirsch DJ, Lodish HF, Stahl A, Tartaglia LA;
 XX WPI: 1999-444398/37.
 XX N-PSDB: AA200344.

XX Fatty acid transport proteins and related polynucleotides, useful
 PT for treating obesity, diabetes and heart disease
 XX
 PS Example 1; Fig 11; 255pp; English.
 CC The invention provides a family of fatty acid transport proteins (FATPs)
 CC that mediate transport of long chain fatty acids (LCFAs) across cell
 CC membranes into cells. Human and murine FATP proteins and nucleic acids
 CC encoding the proteins are provided. The FATP proteins can be produced
 CC by standard recombinant methodology. Fatty acid uptake by cells can be
 CC modulated by modulating biosynthesis of FATP proteins especially FATP6.
 CC In particular, antisense oligonucleotides can be used to modulate FATP
 CC biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
 CC uptake in cardiac muscle of humans. Agents can be directed to cardiac
 CC muscle or liver by administration of a complex of the agent and a FATP6
 CC binding moiety. DNA encoding FATP proteins can be used as a reference
 CC used in detecting variant alleles or homologues. Altering the LCFA uptake
 CC by administering an inhibitor or enhancer of FATP transport function in
 CC the small intestine can decrease or increase calories available as fats,
 CC and can decrease or increase circulating fatty acids. Blocking the
 CC function of FATP4 and also FATP2, is useful for treating obesity,
 CC diabetes and heart disease.

XX Sequence 506 AA:

Query Match 71.9%; Score 2433; DB 20; Length 506;
 Best Local Similarity 91.2%; Pred. No. 5.8e-246;
 Matches 455; Conservative 23; Mismatches 21; Indels 0; Gaps 0;

QY 145 GNAKLGVEALINTLRDALHCTTSRAALVFGSEMAAICVHASLDPESLFCSG 204
 DB 8 gnaaklgveaalintlrldalrhctldtskaralifgsemaasclshsleptlsifsg 67
 QY 205 SWEPGAVPSTEHPLDKARKHPSCDKGFTDKLRYITSGTGLPKAAIVHSRY 264
 DB 68 swepgstvpstehplldedapkhpsndkgtfkliylfsgtgiplkaalivhsry 127
 QY 265 RAAALVYVYFRMRPNDIVDCPLVHSAGNIYIGQCILHGTWVYIRKFSASRWDCI 324
 DB 128 raaalvyvgyfrmrpdidvdcplvhsarkhgdqgcllhgtvairkfsasrtwdci 187
 QY 325 KNCNTIVOTIGLCRYLNLQPREAENOHVMAALGNGLROSITWFSRPHIPVAFY 384
 DB 188 kncntvvyigclcryllnqpreaesrhkymalnglrsiwdfsrphipvaefy 247
 QY 385 GATENCSTGNDSOVGAGFNSRILSVYPRIVRWEDIMELIRGDCVIRCPQCEP 444
 DB 248 gatencstgndsgvgaagfnsrllsvyprlvrvmedimelirgdcvircpqp 307
 QY 445 GOLVGRITOKDLRRPFDGYLNGANNKRIADVFKKDQAVLTGDLVMDLGYLYFDR 504
 DB 308 golvgritokdlrrpfdgylnngannkriadvfkkgdqvayltgdvlymdelgylyfdr 367
 QY 505 TGDTRFMKGENVSTVEGTSLRLDMADVAVYGVETGEGRAGMAVAASPTGCDLER 564
 DB 368 tgdtrfmkgenvstvegtslrlmdadvavgyevetgegragmaavaasptgncdler 427
 QY 565 PAQVLEKELPLARPIFRLPELHKTGYFQKTELKKEGFDRAIVDPPIFYDAQGR 624
 DB 428 faqvlekelplarpifrlpelhktgyfoktelkkekfgfdraivdppifydarqgr 487
 QY 625 YVPLDQEAYSRIAGEEKL 643
 DB 488 yvaldqeaystirigeeekl 506

RESULT 8
 ID AAY14942 standard; Protein: 646 AA.
 XX AAY14942;
 AC

XX 31-MAY-2000 (first entry)
 DT Amino acid sequence of human hFATP1.
 XX
 DE Fatty acid transport protein; FATP; long chain fatty acid; LCFA;
 KW Fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
 XX
 OS Homo sapiens.
 XX
 PN MO9936537-A2.
 XX
 PD 22-JUL-1999.
 XX
 XX 14-JAN-1999; 99WO-US00182.
 XX
 PR 14-JAN-1999; 99US-0232201.
 PR 15-JAN-1998; 98US-0071374.
 PR 20-JUL-1998; 98US-0093491.
 PR 04-DEC-1998; 98US-0110941.
 PR 14-JAN-1999; 98US-0232195.
 PR 14-JAN-1999; 99US-0232197.
 PR 14-JAN-1999; 99US-0232200.
 XX
 PA (MILL-) MILLENNIUM PHARM INC.
 PA (WHEB) WHITEHEAD INST BIOMEDICAL RES.
 XX
 PI Glimeno RE, Hirsch DJ, Lodish HF, Stahl A, Tartaglia LA;
 XX
 DR WPI: 1999-444398/37.
 DR N-PSDB; AAZ00352.
 XX

PT Fatty acid transport proteins and related polynucleotides, useful
 PT for treating obesity, diabetes and heart disease
 XX
 PS Examples; Fig 26; 255pp; English.

CC The invention provides a family of fatty acid transport proteins (FATPs)
 CC that mediate transport of long chain fatty acids (LCFAs) across cell
 CC membranes into cells. Human and murine FATP proteins and nucleic acids
 CC encoding the proteins are provided. The FATP proteins can be produced
 CC by standard recombinant methodology. Fatty acid uptake by cells can be
 CC modulated by modulating biosynthesis of FATP proteins especially FATP6.
 CC In particular, antisense oligonucleotides can be used to modulate FATP
 CC biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
 CC uptake in cardiac muscle of humans. Agents can be directed to cardiac
 CC muscle or liver by administration of a complex of the agent and a FATP6
 CC binding moiety. DNA encoding FATP proteins can be used as a reference
 CC used in detecting variant alleles or homologues. Altering the LCFA uptake
 CC by administering an inhibitor or enhancer of FATP transport function in
 CC the small intestine can decrease or increase calories available as fats,
 CC and can decrease or increase circulating fatty acids. Blocking the
 CC function of FATP4 and also FATP2, is useful for treating obesity,
 CC diabetes and heart disease.

XX Sequence 646 AA:

Query Match 62.6%; Score 2119; DB 20; Length 646;
 Best Local Similarity 62.4%; Pred. No. 4e-211;
 Matches 398; Conservative 91; Mismatches 147; Indels 2; Gaps 2;

QY 4 GASLVGVLFSLK-VLKLPWTVGFSILFLYLGSGGMRFRIFKIRRDIGGLVLA 62
 DB 5 gagaasvvsallwllgplwtvsaaalgyysggyrflirivckarrdlilgslvly 64
 QY 63 KAKVROCIQERRTPVILFSTVRRHDKTALIFEGDTHTWTFRODDEYSSVANFLQANG 122
 DB 65 rlelrhgragrhchprlfgavvgrperialavdaggectfaqdasnvaanflrqlg 124
 QY 123 LASGDVAATFMRNRFVGLWLGMAKLGVAALINTLRDALHCTTSRAALVFGSE 182
 DB 125 fapgdvvaatfmrnrfvglwlgakameaalnvnllrreplafclgsgakallfge 184

QY 183 MASAICEVHSLDPSLILFCSGSWEPGAVPSTEHLDPLKDA-PKHLPCSPDKGFTDKL 241
 DB 185 mvaavaevsghlqskllkicsgdldpethlpldkleasaplqapkskmdrll 244
 QY 242 FYIYSGTGLPKRAIVHSRYRMAALVYGFRRPNDIVDCLPLHSAGNIYIGOC 301
 DB 245 fytysgtglpkkaivhsryrmaafghaymgaadvldcplphsagnliygyc 304
 QY 302 LHHGMTVIRKKFSASRFMDCKIKYNTIYOYIGELCRYLLNQPREAENOHVMAIGN 361
 DB 305 llyglvltvirkkfsasrfmdckikynctvgyigeltcryllkqpreaertrvrlavgn 364
 QY 362 GLRQSIWTFSSRPHIPOVAEFGATECNCSLGNFDSQVAGCFNSRLISFYPIRLRV 421
 DB 365 glrpaiveefterfgvqigefygatecnslamdgkvcsgfnslrlphvpyrlrvk 424
 QY 422 NEDTMELIRGPDGVCIPCGEPGLVGRILQKDLRRFDGYLNOGANNKIADVKFKG 481
 DB 425 nedtmellrdagqlcipcqagepgllvgqinqgdprrirfdgyvsesatskklahavfag 484
 QY 482 DOAYLTGDLVMDLGYLFRDRTGDFRRKGENSTVEGTLRLLDMADVAYGVEV 541
 DB 485 dsayltsgdvlmdelgymlfrdrtgdfrrkgenstveegvlsrlldqtdavaygvav 544
 QY 542 PGTGRAGMAAASPTGNCDLERFAOVLEKEPLIYARPIFLRLPLHKTGYKFOKTEL 601
 DB 545 pvgvkgamaavadvphslldpnaiygelqkvlapyarpiflrlpqvdtgfkiktrll 604
 QY 602 RKEGDPALVKDPLFYLDAGKGRVPLDQEAYSRIQAG 639
 DB 605 gregfdprtsdrllfildlkghyplneavytricsg 642
 RESULT 9
 AAY14946
 ID AAY14946 standard; protein; 646 AA.
 AC AAY14946;
 XX 26-OCT-1999 (first entry)
 DT Amino acid sequence of human hsfARPL.
 XX Fatty acid transport protein; FATP; long chain fatty acid; LCFA; human;
 KM fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.
 OS Homo sapiens.
 XX WO936537-A2.
 PN 22-JUL-1999.
 PD 14-JAN-1999; 99WO-US00182.
 PF 14-JAN-1999; 99US-0232201.
 PR 15-JAN-1998; 98US-0071374.
 PR 20-JUL-1998; 98US-0093491.
 PR 04-DEC-1998; 98US-0110941.
 PR 14-JAN-1999; 99US-0232195.
 PR 14-JAN-1999; 99US-0232197.
 PR 14-JAN-1999; 99US-0232200.
 XX (MILL-) MILLENNIUM PHARM INC.
 PA (WHED) WHITEHEAD INST BIOMEDICAL RES.
 XX Gimeno RE, Hirsch DJ, Lodish HF, Stahl A, Tartaglia LA;
 PI WPI; 1999-444398/37.
 DR N-PSDB; AA200356.
 XX Fatty acid transport proteins and related polynucleotides, useful
 PT for treating obesity, diabetes and heart disease

XX Claim 30; Fig 45; 255pp; English.
 PS The invention provides a family of fatty acid transport proteins (FATPs)
 CC that mediate transport of long chain fatty acids (LCFAs) across cell
 CC membranes into cells. Human and murine FATP proteins and nucleic acids
 CC encoding the proteins are provided. The FATP proteins can be produced
 CC by standard recombinant methodology. Fatty acid uptake by cells can be
 CC modulated by modulating biosynthesis of FATP proteins especially FATP6.
 CC In particular, antisense oligonucleotides can be used to modulate FATP
 CC biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
 CC uptake in cardiac muscle of humans. Agents can be directed to cardiac
 CC muscle or liver by administration of a complex of the agent and a FATP6
 CC binding moiety. DNA encoding FATP proteins can be used as a reference
 CC used in detecting variant alleles or homologues. Altering the LCFA uptake
 CC by administering an inhibitor or enhancer of FATP transport function in
 CC the small intestine can decrease or increase calories available as fats,
 CC and can decrease or increase circulating fatty acids. Blocking the
 CC function of FATP4 and also FATP2, is useful for treating obesity,
 CC diabetes and heart disease.
 XX Sequence 646 AA:
 SQ
 Query Match 62.6%; Score 2119; DB 20; Length 646;
 Best Local Similarity 62.4%; Pred. No. 4e-211;
 Matches 398; Conservative 91; Mismatches 147; Indels 2; Gaps 2;
 QY 4 CASLVGLLFSKL-VKLTPTQVGFSLFLYLTSGSGRFRVRIKTRINDPFGVLKV 62
 DB 5 gagaavsaiaallwllgldpwtwaaalgyvsgvgrflrlvockarrdlglslvllv 64
 QY 63 KAKVROCLQERRVPLIFASTVRRHPKALIEGDTHTWTFROLDYSSVAVLQAG 122
 DB 65 rlelrnrgqhtlprlrfvgvqrpelralvdaigcwtcfagldaysnavanllrfqgl 124
 QY 123 LASGDVAIEMENRNEVGMGLGMAKLVDAALINTNRDALHCTTSRAALVFGSE 182
 DB 125 fapdvvaalflegpelfvlgldakagmeaalnnvllrreplafclgysgakaillfyge 184
 QY 183 MASAICEVHSLDPSLILFCSGSWEPGAVPSTEHLDPLKDA-PKHLPCSPDKGFTDKL 241
 DB 185 mvaavaevsghlqskllkicsgdldpethlpldkleasaplqapkskmdrll 244
 QY 242 FYIYSGTGLPKRAIVHSRYRMAALVYGFRRPNDIVDCLPLHSAGNIYIGOC 301
 DB 245 fytysgtglpkkaivhsryrmaafghaymgaadvldcplphsagnliygyc 304
 QY 302 LHHGMTVIRKKFSASRFMDCKIKYNTIYOYIGELCRYLLNQPREAENOHVMAIGN 361
 DB 305 llyglvltvirkkfsasrfmdckikynctvgyigeltcryllkqpreaertrvrlavgn 364
 QY 362 GLRQSIWTFSSRPHIPOVAEFGATECNCSLGNFDSQVAGCFNSRLISFYPIRLRV 421
 DB 365 glrpaiveefterfgvqigefygatecnslamdgkvcsgfnslrlphvpyrlrvk 424
 QY 422 NEDTMELIRGPDGVCIPCGEPGLVGRILQKDLRRFDGYLNOGANNKIADVKFKG 481
 DB 425 nedtmellrdagqlcipcqagepgllvgqinqgdprrirfdgyvsesatskklahavfag 484
 QY 482 DOAYLTGDLVMDLGYLFRDRTGDFRRKGENSTVEGTLRLLDMADVAYGVEV 541
 DB 485 dsayltsgdvlmdelgymlfrdrtgdfrrkgenstveegvlsrlldqtdavaygvav 544
 QY 542 PGTGRAGMAAASPTGNCDLERFAOVLEKEPLIYARPIFLRLPLHKTGYKFOKTEL 601
 DB 545 pvgvkgamaavadvphslldpnaiygelqkvlapyarpiflrlpqvdtgfkiktrll 604
 QY 602 RKEGDPALVKDPLFYLDAGKGRVPLDQEAYSRIQAG 639
 DB 605 gregfdprtsdrllfildlkghyplneavytricsg 642

RESULT 10

AA40435
ID AAY40435 standard; Protein: 646 AA.

XX
AC AAY40435;

XX
DT 08-FEB-2000 (first entry)

XX
DE Human FATP protein sequence.

XX
KW Fatty acid transport protein; FATP; hFATP; cardiomyopathy; diabetes;
XX long-chain fatty acid metabolism; obesity; human.

XX
OS Homo sapiens.

XX
PN MO9951740-A2.

XX
PD 14-OCT-1999.

XX
PF 02-APR-1999; 99WO-EP02295.

XX
PR 06-APR-1998; 98EP-0400823.

XX
PA (JANC) JANSSEN PHARM NV.

XX
PA (UNIW) UNIV WASHINGTON.

XX
PI Martin G, Nemoto M, Deeb SS, Auwerx J;

XX
PI WPI: 1999-620202/53.

XX
DR N-PSDB; AAZ38122, AAZ38125.

XX
PT New human fatty acid transport protein, hFATP, useful to screen for
XX inhibitors or enhancers useful to regulate fatty acid metabolism -

XX
PS Claim 1; Fig 5; 83pp; English.

XX
CC The invention provides a human fatty acid transport protein (hFATP).
CC hFATP is believed to be involved in the modulation long-chain fatty acid
CC metabolism; the protein and polynucleotides therefore enable production
CC of compositions comprising a component regulating (inhibiting or
CC enhancing) expression of the hFATP gene useful therapeutically to alter
CC intracellular or blood levels of long chain fatty acids. Such compounds
CC are especially useful to treat conditions associated with deficient
CC regulation (e.g. may comprise an inhibitor to treat cardiomyopathies or
CC diabetes or an enhancer to treat obesity. The polynucleotides are also
CC useful to screen compounds for their effects on hFATP expression, e.g.
CC by measuring mRNA transcription in cells/cell extracts (e.g. liver
CC cells) contacted with the compound and comparing with that in non-
CC contacted cells. The present sequence represents the hFATP protein.

XX
SQ Sequence 646 AA;

Query Match 62.5%; Score 2114; DB 20; Length 646;

Best Local Similarity 62.2%; Pred. No. 1.3e-210;

Matches 397; Conservative 91; Mismatches 148; Indels 2; Gaps 2;

QY 4 GASLVGVLLFSKLT-VLKLPMTQVFSLLFLYLGSGGRFTRVFVKTRRQIFGGLVLLXV 62

DB 5 gagaaavvslalwllglpwtaaaalgyvsgwfrlrvkctarrdldfglsvllrv 64

QY 63 KAKVROCIQERRRVPLIASTVRHRPDKTALIEGTDHMTFRQLDDEYSSVANFLQARG 122

DB 65 rlelrrhqrqaghtlprlfgavvgrqperlalvdagtegcwtfagldaynaavallffqlg 124

QY 123 LASGDVAALFENRNREYGLWLGMAKUGVEALINTLRDRLAHCITTSRRLVFGSE 182

DB 125 fapdvvaiflegrefvylwllglaqmeaalinvrlrepiafcigtsgakallfge 184

QY 183 MASATICEVHASLDPSLSLFCGSGWEPGAVPSTEDHLDPLKDA-PKHLSPCPDGFNDKL 241

DB 185 mvaavaevsglhgksllkfcsqdlppegllpdtllldpllleastaplaqpskymdrl 244

QY 242 FYIYISGTTGLPKAAIVHSHRYRMAALVYGFRRMRPNDIVDCLPLHSAGNIVIGQC 301
DB 245 fyytsgtclpkaalvshsryrmaafghahyrngaaadvldcplphsagnivgyqc 304
QY 302 LHHGTVVIRKKFSASRFWDCCIKYICTIVYIGELCRYLNOPPREAHNOHVMALGN 361
DB 305 llyglvvlrkkfksasrfwdccikyictvgylygelcryllkqpreaerhrrvllavn 364
QY 362 GLRQSIWTFNSSRFHTROYAFYVGAECNCISGNDPSQVAGGFSRILSFYPIRLRV 421
DB 365 glrpaaweeftcrfyvryqlyfgyalecncslamdgkvgscgfnrllphvplrlvk 424
QY 422 NEDTMEILRGPDVCIPCGPGEQGLVGRRIQKDLRRPFGYLNQGANKKIRAKVFKG 481
DB 425 nedtmeillrdagdlcpcqagepgllvsglndqdprrldryvsesatsklahavfsk 484
QY 482 DQAVLTGDLVWDELGYLYFRDRTGDFRWKGBNSTTEBGLSLRLMDADVAYGCV 541
DB 485 dsaylsgdvlmdelgylymfrdrtgdfwrgensttevegvlrllgqtdvaygvav 544
QY 542 PGTEGRAGMAAVASPTGNCNCLERFQVLEKELPIVARPIELRLDELHKTGKROKTEL 601
DB 545 pyvegkagmavaadpnslldpnaiyqlqkvlapatpflrlilpqvdtgltklqktrl 604
QY 602 RKEGFPALVDPFLFYLDAAQGRYVPLDQEAYSRIQAG 639
DB 605 qregfiprqtstdrllffldlkqghyplpneavytricsg 642

RESULT 11

AA40436
ID AAY40436 standard; Protein: 646 AA.

XX
AC AAY40436;

XX
DT 08-FEB-2000 (first entry)

XX
DE Human FATP1 protein sequence.

XX
KW Fatty acid transport protein; FATP; hFATP1; cardiomyopathy; diabetes;
XX long-chain fatty acid metabolism; obesity; human.

XX
OS Homo sapiens.

XX
PN MO9951740-A2.

XX
PD 14-OCT-1999.

XX
PF 02-APR-1999; 99WO-EP02295.

XX
PR 06-APR-1998; 98EP-0400823.

XX
PA (JANC) JANSSEN PHARM NV.

XX
PA (UNIW) UNIV WASHINGTON.

XX
PI Martin G, Nemoto M, Deeb SS, Auwerx J;

XX
PI WPI: 1999-620202/53.

XX
PT New human fatty acid transport protein, hFATP, useful to screen for
XX inhibitors or enhancers useful to regulate fatty acid metabolism -

XX
PS Claim 1; Fig 2; 83pp; English.

XX
CC The invention provides a human fatty acid transport protein (hFATP).
CC hFATP is believed to be involved in the modulation long-chain fatty acid
CC metabolism; the protein and polynucleotides therefore enable production
CC of compositions comprising a component regulating (inhibiting or
CC enhancing) expression of the hFATP gene useful therapeutically to alter
CC intracellular or blood levels of long chain fatty acids. Such compounds
CC are especially useful to treat conditions associated with deficient
CC regulation (e.g. may comprise an inhibitor to treat cardiomyopathies or
CC diabetes or an enhancer to treat obesity. The polynucleotides are also

CC useful to screen compounds for their effects on hFATP expression, e.g.
CC by measuring mRNA transcription in cells/cell extracts (e.g. liver
CC cells) contacted with the compound and comparing with that in non-
CC contacted cells. The present sequence represents the hFATP1 protein.

Sequence 646 AA:

Query Match 62.5%; Score 2114; DB 20; Length 646;
Best Local Similarity 62.2%; Pred. No. 1.3e-210;
Matches 397; Conservative 91; Mismatches 148; Indels 2; Gaps 2;

QY 4 GASLVGVLFSSKL-VLKLPMTQVGFSLFLYLGSGMRFIRVFIKTRIRDFGLVLYK 62
DB 5 gagaaavssalilwllglpwtssaaafgyvsggwrfirivcktarrrdlfglsvlirv 64
QY 63 KAKVROCLQERRVPIIFASTVRHHPDKTALIEGDTHTMTFQRLDEYSSVANFLQARG 122
DB 65 rlelrrhrragdtlprlfigavagrpertalvdaqtcectlaqlaysnavanllrqlg 124
QY 123 LASGDVAALIMENNEFVGLMGLMAKLGVEALINTLRDALHCLTTSRAALVFGSE 182
DB 125 fapgdvvaalflegpvtvlgwlgakameaalnnvnlrrpelfafclgtsgakallfge 184
QY 183 MASALICEVHSLDPSLSLFCSGSMEGAVPSTEHLDPLKDA-PKHLPSCPDKGFTDKL 241
DB 185 mvaavaevsghlqksllkfcsgdlspdgallpdtllldpdklkeastaplaqidskmdldl 244
QY 242 FYITSGTGLPKAAIVHRSRYRMALVYGFRRMNDIVYDCLPLYSAGNIVGICG 301
DB 245 fytstgtglpkaaivhrryrmalvghayrmaadvlycdrlpynsagullvgvgc 304
QY 302 LHHGMTVIRKKSASFHMDCKIKYNTVOYIGELCRYLLOPPEAEENQHOVMALGN 361
DB 305 llvgllvrlkksasrfwddclkyntvqyigelcryllkqvreaerirhvrlaygn 364
QY 362 GLNQSTWNTSSRFHPOVAEFEGATECNSLGNESQVAGCFNRRIISFYPIRLVAV 421
DB 365 glpvaeeftgryqyigefyatecnslamdgkyscgfnrrllphvypirlvkv 424
QY 422 NEPTMELIRGPDVCIPOCPGEGOLVGRITIOKPLRRFGVYGNQANNAKTIADKDFK 481
DB 425 nedtmellrdaqlclpcqsggeglilvgqlngqdlrrrtdgysaatkklahsvfsk 484
QY 482 DQAYLFGDVLVMDLGLYFRDRTGDTFRWKGENVSTTEVGLTLDMDADVAYGVEV 541
DB 485 dsaylsgdvlymdelgywfrdrtgdtfrwgenvenstevegylsrllgtdvaygvav 544
QY 542 PGTGGRAGMAAVASPTGNCNLEFRAQVLEKELPLVAPRIFLRLPLRLHKTGYKQKTEL 601
DB 545 pvgvgaagaaavdpnslldpnaaygelqkvlapayarpilflrlpvdttgfkikqkrl 604
QY 602 RKGEFPAIVKDPLEFYLDAGKGRVPLDQEAARYIOAG 639
DB 605 gregfdprqtsdrllfdldkqghyrlplvayvrricsg 642

RESULT 12

AA14952
ID AAY14952 standard; protein: 646 AA.

AC AAY14952;

DE 26-OCT-1999 (first entry)

XX Amino acid sequence of rat rnfatp1.

KW Fatty acid transport protein; FATP, long chain fatty acid; LCFA;

KX fatty acid; FATP biosynthesis; obesity; diabetes; heart disease.

OS Rattus norvegicus.

XX
PN WO9936537-A2.

XX 22-JUL-1999.
PD 14-JAN-1999; 99WO-US00182.
XX 14-JAN-1999; 99WO-US00182.

PR 14-JAN-1999; 99US-0232201.
PR 15-JAN-1998; 98US-0071374.
PR 20-JUL-1998; 98US-0093491.
PR 04-DEC-1998; 98US-0110941.
PR 14-JAN-1999; 99US-0232195.
PR 14-JAN-1999; 99US-0232197.
PR 14-JAN-1999; 99US-0232200.

PA (MILL-) MILLENNIUM PHARM INC.
PA (WHEB) WHITEHEAD INST BIOMEDICAL RES.

PI Gleno RE, Hirsch DJ, Lodish HF, Stahl A, Tartaglia LA;

DR WPI; 1999-444398/37.
DR N-PSDB; AA200362.

PT Fatty acid transport proteins and related polynucleotides, useful
PT for treating obesity, diabetes and heart disease

PS Disclosure; Fig 57; 255pp; English.

CC The invention provides a family of fatty acid transport proteins (FATPs)
CC that mediate transport of long chain fatty acids (LCFAs) across cell
CC membranes into cells. Human and murine FATP proteins and nucleic acids
CC encoding the proteins are provided. The FATP proteins can be produced
CC by standard recombinant methodology. Fatty acid uptake by cells can be
CC modulated by modulating biosynthesis of FATP proteins especially FATP6.
CC In particular, antisense oligonucleotides can be used to modulate FATP
CC biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid
CC uptake in cardiac muscle of humans. Agents can be directed to cardiac
CC muscle or liver by administration of a complex of the agent and a FATP6
CC binding moiety. DNA encoding FATP proteins can be used as a reference
CC used in detecting variant alleles or homologues. Altering the LCFA uptake
CC by administering an inhibitor or enhancer of FATP transport function in
CC the small intestine can decrease or increase calories available as fats,
CC and can decrease or increase circulating fatty acids. Blocking the
CC function of FATP4 and also FATP2, is useful for treating obesity,
CC diabetes and heart disease.

XX Sequence 646 AA;

Query Match 61.7%; Score 2087; DB 20; Length 646;
Best Local Similarity 60.4%; Pred. No. 8.5e-208;
Matches 388; Conservative 98; Mismatches 154; Indels 2; Gaps 2;

QY 4 GASLVGVLFSSKL-VLKLPMTQVGFSLFLYLGSGMRFIRVFIKTRIRDFGLVLYK 62
DB 5 gagaaavssalilwllglpwtssaaafgyvsggwrfirivcktarrrdlfglsvlirv 64
QY 63 KAKVROCLQERRVPIIFASTVRHHPDKTALIEGDTHTMTFQRLDEYSSVANFLQARG 122
DB 65 rlelrrhrragdtlprlfigavagrpertalvdaqtcectlaqlaysnavanllrqlg 124
QY 123 LASGDVAALIMENNEFVGLMGLMAKLGVEALINTLRDALHCLTTSRAALVFGSE 182
DB 125 fapgdvvaalflegpvtvlgwlgakameaalnnvnlrrpelfafclgtsgakallfge 184
QY 183 MASALICEVHSLDPSLSLFCSGSMEGAVPSTEHLDPLKDA-PKHLPSCPDKGFTDKL 241
DB 185 mvaavaevsghlqksllkfcsgdlspdgallpdtllldpdklkeastaplaqidskmdldl 244
QY 242 FYITSGTGLPKAAIVHRSRYRMALVYGFRRMNDIVYDCLPLYSAGNIVGICG 301
DB 245 fytstgtglpkaaivhrryrmalvghayrmaadvlycdrlpynsagullvgvgc 304
QY 302 LHHGMTVIRKKSASFHMDCKIKYNTVOYIGELCRYLLOPPEAEENQHOVMALGN 361

Db 305 llygtlvtrkfkfssrfdwddcvkynctlvvgylgicryllrqpvrderhrvrlavgn 364
 QY 363 GLRQSIWTFNSSRFRHPOVAEFGATECNSLGNFDSOYGACGNSRLSLVYPIRLVAV 421
 Db 365 glrpalweefltgryvgrlgefyatecnsldmndgkvgscgfsrllthvylrlkv 424
 QY 422 NEDTMELIRGPDGVCIPQGPBPGLVGRIRIIOKDLRFREDVYLNGANNKRIADVPFKG 481
 Db 425 nedtemprldseglcipcpgpepgllvqngqdprrfdgvsosaknkiahsvfrkg 484
 QY 482 DOAYLTGDLVMDLGYLFRDRTGDFRMKGENVSTTEVEGTLRLDMADVAAYGVEV 541
 Db 485 dsaylsgdvlvmdelgymlfrdsgdfrwrgenvstteveavslrlgqtdavaygav 544
 QY 542 PGTBRAGMAAASPTGNCDELRFPAQVLEKELPLARPIFLRLPELHKGTGYKQTEL 601
 Db 545 pvgvsgkamaaladpnsqldpnsmygelqkylasypflrlilpvdctgfkqktrl 604
 QY 602 RKEGDPATVKKDPLFYLDOKGRVYPLDQEAYSRIQAGEEKL 643
 Db 605 gregfdprqtsdrllffldksgtrylplderwharicagdfsl 646

RESULT 13

ID AAY14955 standard; protein; 647 AA.
 AAY14955

AC AAY14955;
 XX

DT 26-OCT-1999 (first entry)
 XX

DE Amino acid sequence of murine mFATP1.
 XX

KW Fatty acid transport protein; FATP; long chain fatty acid; LCFA; murine;
 faty acid; FATP biosynthesis; obesity; diabetes; heart disease.
 OS Mus sp.

XX MO9936537-A2.
 PN

PD 22-JUL-1999.
 XX

XX 14-JAN-1999; 99WO-US00182.
 XX

PR 14-JAN-1999; 99US-0232201.
 PR

PR 15-JAN-1998; 98US-0071374.
 PR

PR 20-JUL-1998; 98US-0093491.
 PR

PR 04-DEC-1998; 98US-0110941.
 PR

PR 14-JAN-1999; 99US-0232195.
 PR

PR 14-JAN-1999; 99US-0232197.
 PR

PR 14-JAN-1999; 99US-0232200.
 XX

PA (MILL-) MILLENNIUM PHARM INC.
 PA

PA (WHED) WHITEHEAD INST BIOMEDICAL RES.
 XX

PI Glumeno RE, Hirsch DJ, Lodish HF, Stahl A, Tartaglia LA;
 XX

DR WPI: 1999-444398/37.
 DR

XX N-PSDB; AA200365.
 XX

PT Fatty acid transport proteins and related polynucleotides, useful
 PT for treating obesity, diabetes and heart disease
 XX

PS Example 1; Fig 63; 255pp; English.
 XX

CC The invention provides a family of fatty acid transport proteins (FATPs)
 CC that mediate transport of long chain fatty acids (LCFAs) across cell
 CC membranes into cells. Human and murine FATP proteins and nucleic acids
 CC encoding the proteins are provided. The FATP proteins can be produced
 CC by standard recombinant methodology. Fatty acid uptake by cells can be
 CC modulated by modulating biosynthesis of FATP proteins especially FATP6.
 CC In particular, antisense oligonucleotides can be used to modulate FATP
 CC biosynthesis. Modulation of FATP6 is useful for inhibiting fatty acid

CC uptake in cardiac muscle of humans. Agents can be directed to cardiac
 CC muscle or liver by administration of a complex of the agent and a FATP6
 CC binding moiety. DNA encoding FATP proteins can be used as a reference
 CC used in detecting variant alleles or homologues. Altering the LCFA uptake
 CC by administering an inhibitor or enhancer of FATP transport function in
 CC the small intestine can decrease or increase calories available as fats,
 CC and can decrease or increase circulating fatty acids. Blocking the
 CC function of FATP4 and also FATP2, is useful for treating obesity,
 CC diabetes and heart disease.
 XX

XX Sequence 647 AA:

Query Match 61.5%; Score 2080.5; DB 20; Length 647;
 Best Local Similarity 60.3%; Pred. No. 4, 1e-207;
 Matches 388; Conservative 97; Mismatches 155; Indels 3; Gaps 3;

QY 4 GASLVGVLEFSKL-VLKLPTQVGFSLPLFLYLGSGGWRIRFIRIKTRIDIRGVLVKV 62
 Db 5 gaqtasvasajallwflgplwtwsaaaaafcyvgyggwrrllrvcktarldlglvllrv 64
 QY 63 KANVROCLQERRTPILFASVTRRHBDKTALEFGDTHTFRODDESSVYANFQARG 122
 Db 65 rlelrhrtagdclpclfavarrperialavassgicwtfaqldtynavanflrqlg 124
 QY 123 LASGDVAATFMENRNEPVGILGMALGYDALINTNLRDALLHCLTTSRARALVGSSE 182
 Db 125 fapgdvavavflegpfevlwlgakayvaalvlnvrlreplafclgsaakallgyge 184
 QY 183 MASATCEVHNSLDPSLSLSCSGSMEPGAVPSTENHDLPLLNAP-KHLSCSDKGTDTKL 241
 Db 185 maaaveevseqikslkfcsgdlpdesllpdtqlldpmaaepttlaqagpkqmdrtl 244
 QY 242 FYITTSGETTGLPRAAIVHSRRYRMAALVYGGFRMRPNDIYDCPLYSAGNTVIGICG 301
 Db 245 fyiysgtglgpkaaivnsryrlaafghysmradaavlvcplplysagntlmgvgc 304
 QY 302 ILHGNTVIRKKSASRFPDDCTKYNTIYOYIGELCRLLNQPPEANQNOVRALGN 361
 Db 305 vlyglvtrkfkfssrfdwddcvkynctlvvgylgicryllrqpvrderhrvrlavgn 364
 QY 362 GLRQSIWTFNSSRFRHPOVAEFGATECNSLGNFDSOYGACGNSRLSLVYPIRLVAV 421
 Db 365 glrpalweefltgryvgrlgefyatecnsldmndgkvgscgfsrllthvylrlkv 424
 QY 422 NEDTMELIRGPDGVCIPQGPBPGLVGRIRIIOKDLRFREDVYLNGANNKRIADVPFKG 481
 Db 425 nedtemprldseglcipcpgpepgllvqngqdprrfdgvsosaknkiahsvfrkg 484
 QY 482 DOAYLTGDLVMDLGYLFRDRTGDFRMKGENVSTTEVEGTLRLDMADVAAYGVEV 541
 Db 485 dsaylsgdvlvmdelgymlfrdsgdfrwrgenvstteveavslrlgqtdavaygav 544
 QY 542 PGTBRAGMAAASPTGNCDELRFPAQVLEKELPLARPIFLRLPELHKGTGYKQTEL 601
 Db 545 pvgvsgkamaaladpnsqldpnsmygelqkylasypflrlilpvdctgfkqktrl 604
 QY 602 RKEGDPATVKKDPLFYLDOKGRVYPLDQEAYSRIQAGEEKL 643
 Db 605 gregfdprqtsdrllffldksgtrylplderwharicagdfsl 647

RESULT 14

ID AAY14954 standard; protein; 405 AA.
 AAY14954

AC AAY14954;
 XX

DT 26-OCT-1999 (first entry)
 XX

DE Amino acid sequence of rat mFATP4.
 XX

KW Fatty acid transport protein; FATP; long chain fatty acid; LCFA;

Query Match 42.6% Score 1441.5; DB 20; Length 590;
Best Local Similarity 47.7% Pred. No. 1e-140;
Matches 289; Conservative 99; Mismatches 193; Indels 25; Gaps 4;

```

QY 39 WREIRVFIRIRDIQGLVLLKAKVROQLOERTVPIILFASIVRRHPDKTALIFEGT 98
   |:::| | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 3 wayikilytkrhe-----rlytvadvfermvgahpdkvavvse-- 42

QY 99 DTHWTRQDLDEYSSVANTLQARGLASGDVAALFEMENREVEGLMGLAKLGEAALINT 158
   |||||:::| | | | | | | | | | | | | | | | | | | | | | | | |
Db 43 tqwtlryvnehanvanylqagyykkgvavalllenraeyatwlglskigvltplint 102

QY 159 NLRDALHCLTTSRARALVFGESEMAATCEHNASIDPSTLFC-----SGSWEPGAVPPS 214
   || | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 103 nlrgpsllnsitvancasaliygedfleavtdvakdipanlltfqfneennseteknipq 162

QY 215 TEHLDELKADAPKHLPSCPDKGFTDKLFYIYNSGTTGLPKAIVVHSRYRMALVYGF 274
   ::::| | | | | | | | | | | | | | | | | | | | | | | | |
Db 163 aknlhalltaasyekpnktqvnhdhklvlyltsygtglpkaavishsrylflaagihym 222

QY 275 RMRPNDIYVDCLPLVHSAGNIYIGQCLHGMTVIRKKFSASRFWDICIKNTTVOYT 334
   : | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 223 gfgeedilytplilyhtagglmcmqsvlfgstvsirkkfisasnyfadcaakynatligyi 282

QY 335 GELCRYLINQPPREANQHOVMALNGILROSIWTFNFSRFHIIPOVAEFYGTGECNCLG 394
   ||: ||: | | | | | | | | | | | | | | | | | | | | | | | |
Db 283 gemaryllatkpsydgkhrvrlvfgnglirpqiwpqivgrfnlakygefygategnanim 342

QY 395 NEDSOVGACGFNSRLSEFYPIRLVNVNEDIMELIRGPDGVCIPCQPGEPQOLVGRIIQK 454
   | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 343 nhndtcvgalgtvsrllpklypislraddptgeprlrdnglclqcapnepgvflgklvkq 402

QY 455 DPLRRFDGTLNCGANNKRIAKDVEKKGDQAVYITGDVLMDELGYLXFRDRTGDTFRMKGE 514
   : | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 403 npsreflyvdekasakklivdvlhgmatisgallvadekyllyfkdrlygdtfrwke 462

QY 515 NVSTTEVBGTLRLDMADVAVYGVPEGTGEGRAGMAAVASPTGNCDLERPAQVLEKELP 574
   |||||:::| | | | | | | | | | | | | | | | | | | | | | | |
Db 463 nvstseveagvsnvgykdtvvygvtlphategmagmaalydpereidldvfaaslaakvlp 522

QY 575 LYARPIFLRLPELHKGTGTYKQKTELKKEGDPALVADPLFLYDAQKGRYVPLDQEAYS 634
   |||||:::| | | | | | | | | | | | | | | | | | | | | | | |
Db 523 ayarpiilriltkvdltglfklirkvdlqkegydpnaikdaaly-qtskryelltpqvyd 581

QY 635 RIQAGE 640
   ::| | |
Db 582 qvgrne 587

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Search completed: July 16, 2001, 18:12:49
Job time: 129 sec

